

Remarks

The Office Action dated January 16, 2002 has been carefully reviewed and the foregoing amendments are made in response thereto. In view of these amendments and the following remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Applicants respectfully submit that no prohibited new matter has been introduced by the amendments. While written description support for the claim amendments and the additional claims can be found throughout the specification and in the original claims, specific support for these amendments can be found in the sequence listing, in Figures 1, 2 and 3, in the description of the figures on pages 5-6 and in the results on pages 26-27 (differences between BRCA2 sequences known in the art and BRCA2 sequences identified by the instant inventors, in addition to haplotypes identified by the instant inventors).

Applicants respectfully submit that new claims 87-94 read on the elected species (*i.e.*, they all contain a thymidine residue at the recited position). Accordingly, Applicants request examination of claims 57-94 at this time.

Summary of the Office Action

1. Claims 61(b) to (d) and 62-84 were withdrawn from prosecution as being drawn to independent and distinct inventions pursuant to a previous species election under 35 U.S.C. 121.
2. Claims 61(a), 85 and 86 were rejected under 35 U.S.C. 112 (second paragraph) as being indefinite for failing to point out and distinctly claim the subject matter which Applicants regard as the invention.

Response to the Office Action

Claims 61(b) to (d) and 62-84 were withdrawn from prosecution as purportedly being drawn to independent and distinct inventions under 35 U.S.C. 121. The Office Action indicates that Applicant did not identify any claim directed to the elected species. Applicants respectfully disagree because Applicants indicated that claims 61-86 read on the elected species in the Response to Species Election filed on October 22, 2001 (see second paragraph, last line). Applicants bring to the attention of the Examiner that dependent claims 62-86 all contain a thymidine substitution in Exon 15 of the BRCA2 sequence as set forth in claim 61(a), because each of these claims is dependent on claim 61 and the term "further comprises" is used in each of these claims, indicating that the claimed subject matter must

incorporate the aforementioned substitution in Exon 15. Applicants therefore respectfully request that claims 62-84 be reinstated and examined on the merits.

Rejection under 35 U.S.C. 112 (second paragraph)

Claims 61, 85 and 86 were rejected under 35 U.S.C. 112 (second paragraph) as being indefinite purportedly because the nucleotide sequence of the BRCA2 gene of the claimed nucleic acid molecules is not identified. The basis of this rejection appears to be the lack of specific disclosure of a BRCA2 sequence in the claim.

Respectfully, for the sole purpose of furthering prosecution, Applicants have amended claim 61 so that it no longer contains the rejected claim language. The amended claims now refer expressly to a BRCA2 sequence with unique variations. The Office Action asserts that the claims drawn to a BRCA2 sequence are indefinite because the claimed nucleotide sequence of the BRCA2 gene is not identified (see Office Action at page 2, lines 23-25). Respectfully, the claims are drawn to a genus of nucleic acid molecules, and not a particular BRCA2 sequence. Furthermore, every species encompassed by the claimed genus is either expressly disclosed (see specification at pages 6, 26-27 and 34-35 and at Figure 3) or can be fully described by the presence of a thymidine residue at the defined nucleotide position. Thus, every member of the claimed genus, not only a representative number less than the whole genus, is described in the specification. Applicant respectfully requests that this rejection of the claims be withdrawn.

Conclusion

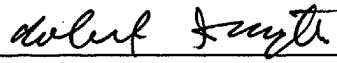
Applicants respectfully request reconsideration and the timely allowance of the pending claims. A favorable action is awaited. Should the Examiner find that an interview would be helpful to further prosecution of this application, he is invited to telephone the undersigned at his convenience. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned Version with markings to show changes made.

Except for issue fees payable under 37 C.F.R. 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. 1.16 and 1.17 which may be required, including any required extension of time fees, or

credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a **constructive petition for extension of time** in accordance with 37 C.F.R. 1.136(a)(3).

Date: **July 16, 2002**
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Respectfully submitted,
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